

Remarks

The Office Action mailed June 27, 2003 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-21 are pending in this application. Claims 1-21 stand rejected.

The rejection of Claims 1-5, 9-13, 15, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Melchione et al. (U.S. Patent No. 5,930,764) ("Melchione") in view of Pham et al. (U.S. Patent No. 5,970,482) ("Pham") and further in view of David M. Kroenke, *Database Processing Fundamentals, Design, and Implementation*, Seventh Ed. (2000) ("Kroenke") is respectfully traversed.

Applicants respectfully submit that the none of Melchione, Pham, or Kroenke, describe or suggest the claimed invention. As discussed below, none of Melchione, Pham, or Kroenke, considered alone or in combination, describe or suggest using an online analytical processing tool and customer demographic data to analyze a combination of models, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, using the online analytical processing tool to combine the models in the determined sequential order, and generating scores for a prospective customer in a database based on predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.

In fact, the Office Action clearly states at page 4 that "neither Melchione nor Pham specifically disclose: using the online analytical processing tool and the customer demographic data to analyze a combination of models; determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool; using the online analytical processing tool to combine the models in the determined sequential order."

Moreover, as discussed below, despite what has been suggested in the Office Action, Kroenke does not describe nor suggest using the online analytical processing tool and the customer demographic data to analyze a combination of models, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, and using the online analytical processing tool to combine the models in the determined sequential order.

Melchione describes a sales process support system and a method for identifying sales targets using a centralized database (10). Central database (10) receives information from a variety of internal and external feeds (21-25), and standardizes and households the information in a three-level hierarchy, including households, customers, and accounts, for use by a financial institution. The information stored on central database (10) is accessed through micromarketing workstations (12) to generate lists of sales leads for marketing campaigns. A database engine (40) is provided for accessing data on central database (10). Contact strategy models are used to identify and target sales leads for each sales campaign. The system distributes sales leads electronically to branch networks, where the sales leads are used to target customers for marketing campaigns.

Pham describes a data mining system (3000) that includes a study manager (3010), a knowledge model engine (3070) coupled to study manager (3010), a discovery manager (3020) coupled to knowledge model engine (3070), an evaluation manager (3030) coupled to knowledge model engine (3070), and a prediction manager (3040) coupled to knowledge model engine (3070). System (3000) permits discovery, evaluation, and prediction of the correlative factors of data, i.e., the conjunctions, as corresponding to neuroexpressions (a semantic connection of neuroagents) connected to an output neuroagent that corresponds to the data output.

Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP). With OLAP, data is viewed in the frame of a table, or with three axes, in that of a cube. OLAP makes no limit on the number of axes, which is sometimes referred to as an OLAP hypercube. A “dimension” refers to a feature of the data to be placed on an axis. The

cells of the cube represent the “measures” of the cube, or the data that is to be displayed. Dimensions that are held constant in a cube are called “slices”. The values of a dimension are called “members”.

Claim 1 recites a method for increasing efficiency of a marketing system that includes a database containing customer demographic data, wherein the steps include “building models of predicted customer profiles...embedding the models within an online analytical processing tool...using the online analytical processing tool and the customer demographic data to analyze a combination of the models...determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool...using the online analytical processing tool to combine the models in the determined sequential order...and generating scores for a prospective customer in the database based on the predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.”

None of Melchione, Pham, or Kroenke, considered alone or in combination, describe or suggest a method as recited in Claim 1. More specifically, none of Melchione, Pham, or Kroenke, considered alone or in combination, describe or suggest using an online analytical processing tool and customer demographic data to analyze a combination of models, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, using the online analytical processing tool to combine the models in the determined sequential order, and generating scores for a prospective customer in a database based on predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.

Rather, Melchione describes a central database that receives and standardizes information for use by a financial institution in generating lists of sales leads for marketing campaigns. Melchione does not describe nor suggest using an online analytical processing tool and customer demographic data to analyze a combination of models; and Pham describes a data mining system

that permits discovery, evaluation, and prediction of the correlative factors of data. As acknowledged by the Office Action at page 4, “neither Melchione nor Pham specifically disclose: using the online analytical processing tool and the customer demographic data to analyze a combination of models; determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool; using the online analytical processing tool to combine the models in the determined sequential order.”

Moreover, Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP). Applicants respectfully traverse the suggestion included in the Office Action at pages 4-5 that Kroenke “discloses multi-dimensional slices i.e. models, organizing i.e. sequencing, the data according to a specified ranking, and combining the models into various view definitions to derive analytical conclusions.” Although Kroenke discusses at pages 386-387 presenting “slices” (i.e., a dimension of information held constant) of information using an OLAP cube, Kroenke does not describe or teach using an online analytical processing tool and customer demographic data to analyze a combination of models, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, using the online analytical processing tool to combine the models in the determined sequential order, and generating scores for a prospective customer in a database based on predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.

More specifically, Kroenke does not describe or teach determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, and using the online analytical processing tool to combine the models in the determined sequential order. Rather, Kroenke merely describes a way of presenting information using an OLAP. Accordingly, Applicants respectfully submit that Claim 1 is patentable over Melchione in view of Pham and further in view of Kroenke.

Claims 2-5, and 9 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-5, and 9 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-5, and 9 likewise are patentable over Melchione in view of Pham and further in view of Kroenke.

Claim 10 recites a system configured for targeting market segments that includes “a customer database...a graphical user interface for entering marketing campaign data...and models of predicted customer profiles based upon historic data that are embedded on an online analytical processing tool, said online analytical processing tool configured to analyze a combination of said models, determine a sequential order for combining said models prior to combining said models based on the model combination analysis, combine said models in the determined sequential order, and generate scores for a prospective customer in said database based on said predicted customer profiles by combining said models in the determined sequential order.”

None of Melchione, Pham, or Kroenke, considered alone or in combination, describe or suggest a system as recited in Claim 10. More specifically, none of Melchione, Pham, or Kroenke, considered alone or in combination, describe or suggest an online analytical processing tool that is configured to analyze a combination of models, determine a sequential order for combining the models prior to combining the models based on the model combination analysis, combine the models in the determined sequential order, and generate scores for a prospective customer in a database based on predicted customer profiles by combining the models in the determined sequential order.

Rather, Melchione describes a central database that receives and standardizes information for use by a financial institution in generating lists of sales leads for marketing campaigns. Melchione does not describe nor suggest using an online analytical processing tool and customer demographic data to analyze a combination of models; and Pham describes a data mining system that permits discovery, evaluation, and prediction of the correlative factors of data. As acknowledged by the Office Action at page 10, “neither Melchione nor Pham specifically

disclose: using the online analytical processing tool and the customer demographic data to analyze a combination of models; determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool; using the online analytical processing tool to combine the models in the determined sequential order.”

Moreover, Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP). Although Kroenke discusses at pages 386-387 presenting “slices” (i.e., a dimension of information held constant) of information using an OLAP cube, Kroenke does not describe or teach an online analytical processing tool that is configured to analyze a combination of models, determine a sequential order for combining the models prior to combining the models based on the model combination analysis, combine the models in the determined sequential order, and generate scores for a prospective customer in a database based on predicted customer profiles by combining the models in the determined sequential order.

More specifically, Kroenke does not describe or teach an online analytical processing tool that is configured to determine a sequential order for combining the models prior to combining the models based on the model combination analysis, and combine the models in the determined sequential order. Rather, Kroenke merely describes a way of presenting information using an OLAP. In fact, Kroenke makes absolutely no mention of combining models in a determined sequential order. Accordingly, Applicants respectfully submit that Claim 10 is patentable over Melchione in view of Pham and in further view of Kroenke.

Claims 11-13, 15, and 18 depend, directly or indirectly, from independent Claim 10. When the recitations of Claims 11-13, 15, and 18 considered in combination with the recitations of Claim 10, Applicants submit that dependent Claims 11-13, 15, and 18 likewise are patentable over Melchione in view of Pham and in further view of Kroenke.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 1-5, 9-13, 15, and 18 be withdrawn.

The rejection of Claims 6-8, 14, 16, 17, and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over Melchione in view of Pham and Kroenke and in further view of Sheppard is respectfully traversed.

Melchione, Pham, and Kroenke are all described above. Sheppard describes a system (10) for analyzing a data file that contains a plurality of data records with each data record containing a plurality of parameters. System (10) includes an input (40) for receiving the data file and a data processor (32) that has at least one of several data processing functions. These data processing functions include a segmentation function (34) for segmenting the data records into a plurality of segments based on the parameters. The data processing functions also include a clustering function (36) for clustering the data records into a plurality of clusters that contain data records having similar parameters. A prediction function (38) for predicting expected future results from the parameters in the data records may also be provided with the data processor (32).

Claims 6-8 and 20 depend from independent Claim 1. Claim 1 recites a method for increasing efficiency of a marketing system that includes a database containing customer demographic data, wherein the steps include “building models of predicted customer profiles...embedding the models within an online analytical processing tool...using the online analytical processing tool and the customer demographic data to analyze a combination of the models...determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool...using the online analytical processing tool to combine the models in the determined sequential order...and generating scores for a prospective customer in the database based on the predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.”

None of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest a method as recited in Claim 1. More specifically, none of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest using an online

analytical processing tool and customer demographic data to analyze a combination of models, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, using the online analytical processing tool to combine the models in the determined sequential order, and generating scores for a prospective customer in a database based on predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.

Rather, Melchione describes a sales process support system that receives and standardizes information for use by a financial institution in generating lists of sales leads for marketing campaigns; Pham describes a data mining system that permits discovery, evaluation, and prediction of the correlative factors of data; Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP); and Sheppard describes a system for analyzing a data file that includes a data processor that has at least one of several data processing functions including a segmentation function, a clustering function, and a prediction function.

Although Kroenke discusses at pages 386-387 presenting “slices” (i.e., a dimension of information held constant) of information using an OLAP cube, Kroenke does not describe or teach determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, and using the online analytical processing tool to combine the models in the determined sequential order. Rather, Kroenke merely describes a way of presenting information using an OLAP. Accordingly, Applicants respectfully submit that Claim 1 is patentable over Melchione in view of Pham and Kroenke and in further view of Sheppard.

When the recitations of Claims 6-8 and 20 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 6-8 and 20 likewise are patentable over Melchione in view of Pham and Kroenke and in further view of Sheppard.

Claims 14, 16, 17, and 21 depend from independent Claim 10. Claim 10 recites a system configured for targeting market segments that includes “a customer database...a graphical user interface for entering marketing campaign data...and models of predicted customer profiles based upon historic data that are embedded on an online analytical processing tool, said online analytical processing tool configured to analyze a combination of said models, determine a sequential order for combining said models prior to combining said models based on the model combination analysis, combine said models in the determined sequential order, and generate scores for a prospective customer in said database based on said predicted customer profiles by combining said models in the determined sequential order.”

None of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest a system as recited in Claim 10. More specifically, none of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest an online analytical processing tool that is configured to analyze a combination of models, determine a sequential order for combining the models prior to combining the models based on the model combination analysis, combine the models in the determined sequential order, and generate scores for a prospective customer in a database based on predicted customer profiles by combining the models in the determined sequential order.

Rather, Melchione describes a sales process support system that receives and standardizes information for use by a financial institution in generating lists of sales leads for marketing campaigns; Pham describes a data mining system that permits discovery, evaluation, and prediction of the correlative factors of data; Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP); and Sheppard describes a system for analyzing a data file that includes a data processor that has at least one of several data processing functions including a segmentation function, a clustering function, and a prediction function. Accordingly, Applicants respectfully submit that Claim 10 is patentable over Melchione in view of Pham and Kroenke and in further view of Sheppard.

When the recitations of Claims 14, 16, 17, and 21 are considered in combination with the recitations of Claim 10, Applicants submit that dependent Claims 14, 16, 17, and 21 likewise are patentable over Melchione in view of Pham and Kroenke and in further view of Sheppard.

Claim 19 recites a method for increasing efficiency of a marketing system that includes a database containing customer demographic data, wherein the steps include “building models of predicted customer profiles, the models include a propensity model for supplying predicted answers to questions, a propensity model for determining a likelihood of a customer to close an account early, a propensity model for determining a likelihood of a customer to default on an account, a payment behavior prediction model for estimating risk, a client prospecting model for developing business...embedding the models within an online analytical processing tool...utilizing the online analytical processing tool and the customer demographic data to analyze each combination of the models based on at least one of risk, attrition, and profitability...determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool...using the online analytical processing tool to combine the models in the determined sequential order...and generating scores for a prospective customer in the database based on the predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.”

None of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest a method as recited in Claim 19. More specifically, none of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest a method for increasing efficiency of a marketing system that includes building models of predicted customer profiles wherein the models include a propensity model for supplying predicted answers to questions, a propensity model for determining a likelihood of a customer to close an account early, a propensity model for determining a likelihood of a customer to default on an account, a payment behavior prediction model for estimating risk, a client prospecting model for developing business.

Moreover, none of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest a method for increasing efficiency of a marketing system that includes utilizing an online analytical processing tool and customer demographic data to analyze each combination of models based on at least one of risk, attrition, and profitability, determining a sequential order for combining the models prior to combining the models based on the model combination analysis performed by the online analytical processing tool, using the online analytical processing tool to combine the models in the determined sequential order, and generating scores for a prospective customer in a database based on the predicted customer profiles wherein the online analytical processing tool generates the scores by combining the models in the determined sequential order.

Rather, Melchione describes a sales process support system that receives and standardizes information for use by a financial institution in generating lists of sales leads for marketing campaigns; Pham describes a data mining system that permits discovery, evaluation, and prediction of the correlative factors of data; Kroenke describes a new way of presenting information that is called On Line Analytical Processing (OLAP); and Sheppard describes a system for analyzing a data file that includes a data processor that has at least one of several data processing functions including a segmentation function, a clustering function, and a prediction function.

Furthermore, Applicants respectfully traverse the suggestion included in the Office Action at pages 17-19 that Sheppard discloses all of the models recited in Claim 19. Although Sheppard mentions at col. 2, lines 44-48 that the “present invention ... may be used to predict customer or potential customer behavior, including, for example, propensity to respond to ... profitability, credit risk, and probability of attrition.” Sheppard does not describe or teach a propensity model for supplying predicted answers to questions, a propensity model for determining a likelihood of a customer to close an account early, or a client prospecting model for developing business. Accordingly, Applicants respectfully submit that Claim 19 is patentable over Melchione in view of Pham and Kroenke and in further view of Sheppard.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 6-8, 14, 16, 17, and 19-21 be withdrawn.

Furthermore, the rejection of Claims 1-5, 9-13, 15, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Melchione in view of Pham and further in view of Kroenke; and the rejection of Claims 6-8, 14, 16, 17, and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over Melchione in view of Pham and Kroenke in further view of Sheppard is further traversed on the grounds that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Melchione, Pham, Kroenke, or Sheppard, considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Melchione with Pham, Kroenke, and Sheppard because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose

among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection of Claims 1-21 be withdrawn.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 1-21 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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